

What is claimed is:

[Claim 1] A protective apparatus, comprising: a flexible hood adapted to fully encapsulate a head of a user in a substantially airtight seal; said flexible hood having an upper part and a lower part; said upper part including a transparent visor adapted to enable a user to see therethrough when the flexible hood is worn; a lower part formed integrally with said upper part; said upper part having a first, extended position where said visor is adapted to be spaced a first predetermined distance from said user's eyes, said first, extended position being a position of repose of said upper part; said upper part having a second, retracted position where said visor is adapted to be spaced a second predetermined distance from said user's eyes, said second predetermined distance being less than said first predetermined distance; said upper part being adjustable between said extended position and said retracted position; said lower part having a fixed position; said protective apparatus adapted to protect said user when said upper part is in said extended position, when said upper part is in said retracted position, and when said upper part is in any preselected position between said extended and retracted positions; at least one filter housing secured to an external side of said lower part, said at least one filter housing adapted to house at least one filter; a breathing means positioned primarily in an interior of said flexible hood; said breathing means including a part thereof positioned externally to said flexible hood; a first loop member adapted to slidably receive a strap therethrough; said first loop member being mounted to said part of said breathing means positioned externally to said flexible hood in depending relation thereto; a second loop member adapted to slidably receive a strap therethrough being mounted to a top wall of said at least one filter housing at a rearward end thereof; a third loop member adapted to slidably receive a strap therethrough being mounted to a top wall of said at least one filter housing at a forward end thereof; a strap in the form of a continuous loop being received within said first, second, and third loop members; said first and third loop members being in closely spaced relation to one another when said upper part of said flexible hood is in said first, extended position; said first and second loop members being in closely spaced relation to one another when said upper part of said flexible hood is in said second, retracted position; whereby said flexible hood is adapted to accommodate the head of a user having a large head and wearing spectacles when said upper part is in said first, extended position; whereby said flexible hood is adapted to accommodate the head of a user having a small head and not wearing spectacles when said upper part is in said second, retracted position; whereby there are an infinite number of positions of adjustment between said first, extended position and said second, retracted position so that said flexible hood is adapted to accommodate users having a wide variety of head sizes and users both wearing and not wearing spectacles; and whereby each user may adjust the position of said upper part of said flexible hood to optimize the field of vision by donning the flexible hood

with the upper part in the first, extended position, and by retracting the upper part until further retraction is prevented by a user's head or spectacles.

[Claim 2] The flexible hood of claim 1, further comprising: said breathing means including a mouthpiece positioned in an interior of said flexible hood, in said lower part, and in fluid communication with said at least one filter; said breathing means further including a nose clip positioned in an interior of said flexible hood, in said upper part; said breathing means further including an aperture formed in said visor; a nose clip base positioned in said aperture and having a perimeter that sealingly engages a periphery of said aperture, said nose clip base having a part thereof external to said flexible hood; said nose clip being formed integrally with said nose clip base; said first loop member depending from said part of said nose clip base that is external to said flexible hood; whereby said upper part of said flexible hood is expanded by holding said at least one filter housing against movement while pushing said nose clip away from a user's face; whereby said upper part of said flexible hood is retracted by holding said at least one filter housing against movement while pushing said nose clip towards a user's face.

[Claim 3] The flexible hood of claim 2, further comprising: an imperforate, flexible membrane that interconnects said nose clip and said nose clip base so that said nose clip may be moved toward a user's face or away from a user's face to accommodate user's having heads of differing sizes.

[Claim 4] The flexible hood of claim 1, further comprising: said flexible hood having a front and a back, said visor being mounted in said front of said flexible hood; said flexible hood having a compressed configuration; said compressed configuration being attainable when said upper part of said flexible hood is in said second, retracted configuration; said compressed configuration being attainable when said flexible hood is not worn by a user; said compressed configuration being attained when said back of said flexible hood is displaced into close proximity to said front of said flexible hood.

[Claim 5] The flexible hood of claim 4, further comprising: said flexible hood having a folded configuration where said upper part of said flexible hood is in said retracted and compressed configuration and is folded so that said visor overlies and abuts said at least one filter housing; whereby said at least one filter housing protects said visor from scratches and creases when said flexible hood is so folded.

[Claim 6] The flexible hood of claim 1, further comprising: said breathing means including a half mask cup positioned primarily in an interior of said flexible hood, said half mask cup being adapted to cover the mouth and nose of a user; said half mask cup having a part thereof that is positioned external to said flexible hood; said first loop member depending from said part of said half mask cup that is external to said flexible hood; whereby said upper part of said flexible hood is expanded by holding said filter housing against movement while pushing said upper part of said flexible

hood away from a user's face; whereby said upper part of said flexible hood is retracted by holding said filter housing against movement while pushing said upper part of said flexible hood towards a user's face.

[Claim 7] The flexible hood of claim 1, further comprising: a fourth loop member secured to a first side of said at least one filter housing; a fifth loop member secured to a second side of said at least one filter housing; a first filter strap having a leading end secured to said fourth loop member; a second filter strap having a leading end secured to said fifth loop member; a first lock member secured to a first side of said upper part of said flexible hood; a second lock member secured to a second side of said upper part of said flexible hood; a continuous head loop strap that circumscribes said upper part of said flexible hood; said first lock member having a first strap-engaging part that adjustably engages a trailing end of said first filter strap; said first lock member having a second loop part through which extends said continuous loop head strap; said second lock member having a first strap-engaging part that adjustably engages a trailing end of said second filter strap; said second lock member having a second loop part through which extends said continuous loop head strap; whereby tightening said first and second filter straps tightens said continuous loop head strap.

[Claim 8] A flexible hood, comprising: an upper part including a visor adapted to enable a user to see therethrough when the flexible hood is worn; a lower part formed integrally with said upper part; a pair of filter housings secured to an external side of said lower part in laterally spaced apart relation to one another, each of said filter housings adapted to house a filter; a breathing means positioned primarily in an interior of said flexible hood, said breathing means being in fluid communication with said filters; said breathing means including a part thereof positioned externally to said flexible hood; a first loop member adapted to slidably receive a pair of straps therethrough; said first loop member being mounted to said part of said breathing means positioned externally to said flexible hood in depending relation thereto; a second loop member adapted to slidably receive a strap therethrough being mounted to a top wall of a first filter housing at a rearward end thereof; a third loop member adapted to slidably receive a strap therethrough being mounted to a top wall of said first filter housing at a forward end thereof; a fourth loop member adapted to slidably receive a strap therethrough being mounted to a top wall of said second filter housing at a rearward end thereof; a fifth loop member adapted to slidably receive a strap therethrough being mounted to a top wall of said second filter housing at a forward end thereof; a first continuous loop strap being received within said first, second, and third loop members; a second continuous loop strap being received within said first, fourth, and fifth loop members; said upper part of said flexible hood having a first, extended position where said first, third, and fifth loop members are in closely spaced relation to one another; said upper part of said flexible hood having a second, retracted position where said first, second, and fourth loop members are in closely spaced relation to one another; whereby said flexible hood is adapted to accommodate

the head of a user having a large head and wearing spectacles when said upper part is in said first, extended position; whereby said flexible hood is adapted to accommodate the head of a user having a small head and not wearing spectacles when said upper part is in said second, retracted position; whereby there are an infinite number of positions of adjustment between said first, extended position and said second, retracted position so that said flexible hood is adapted to accommodate users having a wide variety of head sizes and users both wearing and not wearing spectacles; and whereby each user may adjust the position of said upper part of said flexible hood to optimize the field of vision by donning the flexible hood with the upper part in the first, extended position, and by retracting the upper part until further retraction is prevented by a user's head or spectacles.

[Claim 9] The flexible hood of claim 8, further comprising: said breathing means including a nose clip positioned in an interior of said flexible hood, in said upper part; said breathing means further including an aperture formed in said visor; a nose clip base positioned in said aperture and having a perimeter that sealingly engages a periphery of said aperture, said nose clip base having a part thereof external to said flexible hood; said nose clip being formed integrally with said nose clip base; said first loop member depending from said part of said nose clip base that is external to said flexible hood; whereby said upper part of said flexible hood is expanded by holding said filter housings against movement while pushing said nose clip away from a user's face; whereby said upper part of said flexible hood is retracted by holding said filter housings against movement while pulling said nose clip towards a user's face.

[Claim 10] The flexible hood of claim 9, further comprising: an imperforate, flexible membrane that interconnects said nose clip and said nose clip base so that said nose clip may be moved toward a user's face or away from a user's face to accommodate user's having heads of differing sizes.

[Claim 11] The flexible hood of claim 8, further comprising: said flexible hood having a front and a back, said visor being mounted in said front of said flexible hood; said flexible hood having a compressed configuration; said compressed configuration being attainable when said upper part of said flexible hood is in its fully retracted configuration; said compressed configuration being attainable when said flexible hood is not worn by a user; said compressed configuration being attained when said back of said flexible hood is displaced into close proximity to said front of said flexible hood.

[Claim 12] The flexible hood of claim 11, further comprising: said flexible hood having a folded configuration where said upper part of said flexible hood in said retracted and compressed configuration is folded so that said visor overlies and abuts said pair of filter housings; whereby said pair of filter housings protect said visor from scratches and creases when said flexible hood is so folded.

[Claim 13] The flexible hood of claim 8, further comprising: said breathing means including a half mask cup positioned primarily in an interior of said flexible hood, said half mask cup being adapted to cover the mouth and nose of a user; said half mask cup having a part thereof that is positioned external to said flexible hood; said first loop member depending from said part of said half mask cup that is external to said flexible hood; whereby said upper part of said flexible hood is expanded by holding said pair of filter housings against movement while pushing said upper part of said flexible hood away from a user's face; whereby said upper part of said flexible hood is retracted by holding said pair of filter housings against movement while pushing said upper half of said flexible hood towards a user's face.

[Claim 14] The flexible hood of claim 8, further comprising: a first filter loop member secured to a first side of said filter housing; a second filter loop member secured to a second side of said filter housing; a first filter strap having a leading end secured to said first filter loop member; a second filter strap having a leading end secured to said second filter loop member; a first lock member secured to a first side of said upper part of said flexible hood; a second lock member secured to a second side of said upper part of said flexible hood; a continuous head loop strap that circumscribes said upper part of said flexible hood; said first lock member having a first strap-engaging part that adjustably engages a trailing end of said first filter strap; said first lock member having a second loop part through which extends said continuous loop head strap; said second lock member having a first strap-engaging part that adjustably engages a trailing end of said second filter strap; said second lock member having a second loop part through which extends said continuous loop head strap; whereby tightening of said first and second filter straps tightens said continuous loop head strap.